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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended) A method for determining a recording power of a radiation beam for recording information onto a recording medium operated at a user-desired speed, ~~multiple of test speeds being previously provided with~~, said method comprising the steps of:

(a) ~~under operation of the test speeds in turn~~, determining an optimum recording power corresponding to ~~[[the]] each of a plurality of test [[speed]] speeds~~ being operated, respectively;

(b) ~~fitting the corresponding optimum recording powers versus of the test speeds to generate~~ generating a function of speed based on a relationship between the optimum recording power and the corresponding test speed; and

(c) calculating said recording power of the user-desired speed by applying said user-desired speed in said function of speed.

Claim 2 (currently amended) The method of claim 1, between step (b) and step (c), further comprising the step of:

(b1) judging ~~[[if]] whether~~ the user-desired speed is equal to ~~anyone of the any of the plurality of~~ test speeds, ~~and if NO, performing step (c)~~;

(b2) if the user-desired speed is not equal to any of the plurality of test speeds then performing step (c); and

(b3) otherwise setting the recording power of the user-desired speed as the optimum recording power of a corresponding test speed equal to the user-desired speed and not performing (c).

Claim 3 (currently amended) The method of claim 2, wherein the user-desired speed is faster than all of the plurality of test speeds.

Claim 4 (canceled).

Claim 5 (currently amended) The method of claim ~~[[4]] 1~~, wherein step (a) ~~is performed, under operation of the multiple of test speeds, respectively, by the steps of comprising:~~

(a1) recording information onto the recording medium while varying a ~~current~~

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predetermined recording power;

(a2) receiving ~~[[the]]~~ a radiation beam reflected from the recording medium during step (a1);

(a3) analyzing the reflected radiation beam to estimate effect of recording information under operation of the test speed being operated; and

(a4) changing the predetermined recording power and repeating steps (a1) through (a3) until the optimum recording power corresponding to the test speed being operated of the corresponding test speed is determined.

Claim 6 (original) The method of claim 5, wherein said function of speed is a polynomial function of at least two orders.

Claim 7 (original) The method of claim 5, wherein said function of speed is an exponential function.

Claim 8 (currently amended) The method of claim 5, wherein said function of speed is generated by a curve-fitting program function of speed built in an application.

Claim 9 (currently amended) An information recording/reproducing apparatus capable of determining a recording power of a radiation beam for recording information onto a recording medium operated at a user-desired speed, ~~said apparatus being previously operated at multiple of test speeds in turn,~~ said apparatus comprising:

a recording processing device comprising a radiation generating circuit for recording information onto the recording medium ~~while varying a current recording power,~~

a retrieving processing device comprising a radiation detector for receiving the radiation beam reflected from the recording medium during recording of information;

a controller, connected to said recording processing device and said retrieving processing device, for determining an optimum recording power corresponding to each of a plurality of test speeds being operated by analyzing the reflected radiation beam to estimate effect of recording information under operation of the test speed being operated until an optimum recording power corresponding to the test speed being operated is determined, and then for fitting the corresponding optimum recording powers versus the test speeds to generate generating a function of speed based on a relationship between the optimum recording power and the corresponding test speed; and

a determining device, connected to said controller, ~~for receiving input of said user desired speed, and~~ for calculating said recording power by applying said user-desired speed in said

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function of speed.

Claim 10 (currently amended) The information recording/reproducing apparatus of claim 9, wherein the user-desired speed is faster than all of the plurality of test speeds.

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Claim 11 (currently amended) The information recording/reproducing apparatus of claim 9, wherein the determining device also ~~functions judging judges~~ whether said user-desired speed is equal to ~~any one of the~~ any of the plurality of test [[speed]] speeds, and ~~if YES, the determining device functions determining the optimum recording power, whose corresponding test speed is equal to said user-desired speed, as said recording power for said user-desired speed in place of calculating said recording power by applying said user-desired speed in said function of speed if the user-~~ desired speed is equal to a corresponding test speed then the controller sets the recording power of the user-desired speed as the optimum recording power of the corresponding test speed and skips applying the user-desired speed in the function of speed.

Claim 12 (original) The information recording/reproducing apparatus of claim 11, wherein said function of speed is a polynomial function of at least two orders.

Claim 13 (original) The information recording/reproducing apparatus of claim 11, wherein said function of speed is an exponential function.

Claim 14 (currently amended) The information recording/reproducing apparatus of claim 11, wherein said function of speed is generated by a curve-fitting program ~~function of speed built in an application.~~